PATTERNS OF POWER · HYPOTHESIS

Without Conferring

How a distribution of holdings taken by force becomes an order that armed men will defend — the two machines built in opposite directions, the materials neither can be made from, and the coalition that assembles for nothing

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with Claude (Anthropic) · 2026

held as tested, not revealed

Held as tested, not revealed.

A case study in the Patterns of Power series.
Primary sources quoted exactly; modern scholarship paraphrased and credited.
Contested figures given as ranges. Nothing reconstructed from memory.

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Preface

This is a hypothesis. It states a mechanism, gives the reasoning, says what would show it wrong, and appends the historical material it was built from so a reader can check the fit himself.

It belongs to a long collaboration between Thomas J. Bryan, who directs the research and makes the judgements, and Claude, Anthropic's model, which does the synthesis, retrieval, drafting and argument. Facts that carry weight are checked against sources before anything is built on them, and where accounts disagree the disagreement is reported rather than resolved.

It assumes no prior reading. Every scholar named is explained in plain words before their work is used, and every case is built from the beginning.

It is written to be falsifiable rather than persuasive. Part 11 registers predictions, Part 12 says what is weak — including two places where the argument may be circular — and Part 13 is about who paid for all of this and is not an appendix.

And it is not a theory of legitimacy. Nothing here requires anybody to believe anything, approve of anything, or be deceived about anything. The mechanism runs on what people can predict about each other, which is compatible with total private cynicism, and the historical record is full of orders held up for centuries by men who plainly thought the whole thing was a fiction and behaved impeccably anyway.

Where to attack it

The paper is long and a reader cannot otherwise tell which parts carry weight. **Three claims are load-bearing. If any one is false the argument fails.**

First, the simultaneity constraint (Part 1). That what a coordination device must supply is not agreement but *independent, contemporaneous verdict-formation without communication*.

Second, the opposed defences (Part 3). That a rule and an instance are threatened by different things, defended in opposite directions, and cannot be housed in one institution.

Third, the completed-event answer (Part 5). That a restriction consisting of a finished public act is endogenous only at the moment of its creation and exogenous forever afterwards, including to its author.

Everything else — the coalition variables, the life-cycle, the failure taxonomy, the corollaries — is elaboration. It could be wrong in parts without damaging the core, and a reader who knocks over a corollary has not knocked over the argument.

1. Force settles today

Begin with a distinction ordinary speech collapses.

Possession is what force holds now. It is present-tense, it is in one place at a time, and it lapses when the capacity sustaining it lapses — at illness, at distance, at distraction, and completely at death.

Ownership is a different sort of claim: that this will still be mine tomorrow while I sleep, mine next season while I am elsewhere, and that when I die other people will treat my son as its holder.

So ownership is not a relation between a person and a thing at all. It is a structure of expectations in other people's heads, and specifically in the heads of people strong enough to take the thing who nonetheless will not. No sword reaches that. A sword takes a field today; no sword makes it true that others will respect the taking next year.

This is an old observation and it is worth knowing how old. **David Hume**, in the third book of the *Treatise of Human Nature* (1739–40), argued that property is a convention arising without any promise or contract, from a mutual sense of common interest that grows by degrees. His image is two men who row a boat in time with each other having never agreed to. Two and a half centuries later **Robert Ellickson**'s fieldwork among Californian ranchers, published as *Order Without Law* (1991), found neighbours settling cattle-trespass disputes by informal norms while being, in many cases, simply ignorant of the legal rules that supposedly governed them. Property functioned; the state's definition was not what was doing it.

Nothing in this paper is stranger than Hume's rowers. It is an attempt to say what the rowers are watching.

2. The decision that governs is the bystander's

Picture six armed holders in one country. Any can attack a neighbour, and whether he does depends far less on his own nerve than on what the other five will do.

Without a shared reference each of the five reasons identically. *Not my quarrel. Intervening costs me men and earns me a permanent enemy. And intervening alone makes me the next target while the others husband their strength.* So each waits, and each knows the others are reasoning the same way, which is exactly what makes the seizure safe.

> ***Predation is not a failure of restraint. It is a coordination failure among the men who might have punished it.***

Give every holding a common source and the arithmetic inverts. If a seizure stands, what has been established is that holdings *of this kind* may be taken, which is a fact about each man's own. Intervening becomes self-defence at one remove, and each can predict the others are making the same calculation.

A man abstains not because he believes, but because he can count.

3. And the constraint is simultaneity

Here is the part usually skipped, and everything else follows from it.

It is not enough that each man would *prefer* to punish a breach. He must be able to establish that a breach has occurred, quickly, and be confident that the others are establishing the same thing at the same time, **without conferring**.

Why without conferring? Because there is no time, and because a meeting is itself a conspiracy that can be punished. Six magnates who must caucus before they can agree that a line was crossed are six magnates who will be arrested separately.

So the question each man is actually asking is narrower than it looks:

> ***"If I keep to the arrangement and he does not, will everyone know — at once, and without our having to talk about it?"***

If yes, he is safe both ways: safe if he complies, and deterred if he considers not complying. If no, then no arrangement exists, whatever anyone has signed.

Three arguments from outside history bear directly on this. **Thomas Schelling**, in *The Strategy of Conflict* (1960), showed that people coordinating without communicating converge not on the best option but on the *conspicuous* one — two strangers told to meet in a city, unable to confer, do better aiming at the famous clock than at the objectively most convenient spot. **David Lewis**, in *Convention* (1969), named what such a landmark requires: not merely that everyone knows it, but that everyone knows that everyone knows it, upward without limit — **common knowledge**. And **Michael Chwe**, in *Rational Ritual* (2001), showed what public ceremony is for. It does not inform the individual, who mostly knew already; it lets each person see that everyone else is receiving the same thing at the same moment, which is the only way common knowledge is manufactured at scale.

What none of them asks is what a landmark must be like in order not to be picked up and carried off by one of the people using it. That is this paper.

4. The question always has two halves

Look at the *form* of the answer a bystander needs. It is never a single proposition. It is always of the shape **does this case fall under that rule**.

- The rule: the eldest legitimate son succeeds. The case: this man is the eldest legitimate son.
- The rule: the leader takes one part in five. The case: this heap is what was taken, and that pile is a fifth of it.
- The rule: land held from the crown descends by the charter's terms. The case: this field is the field the charter describes, and this man is the grantee's heir.

If either half is uncertain the answer is uncertain and nobody moves.

> ***A perfect rule applied to an unknown case coordinates nobody.*** *Six lords who all agree that the eldest son inherits, and cannot establish which of two claimants is the eldest son, are in exactly the position of six lords with no rule at all.*

Call the first half **the rule** and the second **the instance**. This is not a refinement but a fact about the logical form of the question.

There is a developed version of the same distinction in economics. In the contract theory associated with **Sanford Grossman, Oliver Hart and John Moore** from the mid-1980s, a central distinction is between a fact being *observable* and being *verifiable*: two partners may both know perfectly well how much effort the other put in, and if a court cannot confirm it no contract can be written on it, and both are pushed into cruder arrangements that leave value on the table. Our bystander is the third party, and the reason he stays home is very often not that he doubts the rule but that he cannot establish the instance. *That distinction is itself contested in that literature and is used here as illustration rather than authority.*

5. The two halves are defended in opposite directions

This is the second load-bearing claim. If it is wrong, most of what follows goes with it.

The two halves are threatened by different things.

A rule is threatened by revision. Its danger is that somebody with a stake rewrites it — or, more commonly and more dangerously, changes who gets to read it. The defence is to put it where no living player can reach: make it a fact about the past, attribute it to nobody alive, attach it to an office rather than a man, and if possible to something nobody made at all. The defence of a rule is **distance**, in time, in authorship, and in reach.

An instance is threatened by concealment. Its danger is not that somebody rewrites the law of succession but that somebody hides the second son, moves the boundary stone, understates the harvest or forges the charter. Distance does nothing against this. A rule sealed in a temple by a dead man is no help whatever in establishing what is in the barn. What establishes an instance is other people who saw it, in numbers, on the record, where the record can be got at. The defence of an instance is **witness**: proximity, multiplicity, and custody within reach.

And now the claim the paper turns on. Those defences are not merely different. They are opposed, and structurally so.

What makes a rule safe is that no living person may touch it. What makes an instance safe is that many living people are touching it right now — attesting, recording, comparing, keeping copies. Authorlessness is the safety of the rule, and a witness is precisely an author of a record. You cannot have a thing that nobody living may alter and that many living people are currently certifying, because certifying is altering.

> ***A rule is protected by being out of everyone's hands. An instance is protected by being in everyone's hands. No single institution can do both — so every order needs two, and the joint between them is a permanent structural weakness.***

Three things this immediately explains

Why there is always somebody standing in the joint. The rule is stored far away, in the past, attributed to nobody. The instance is stored close by, among witnesses, in the present. Somebody has to stand in both rooms, and he is the only person in the system who does — which is why he is the cheapest thing in the order to attack. Attacking the rule is expensive and conspicuous; attacking the instance means suborning the witnesses; attacking the man who matches them requires neither.

Why an interpreter's independence matters for one job and not the other. Telling the powerful *no* is rule-defence and requires that his standing cannot be revoked. Making every holding checkable against one source is instance-matching and requires only that he be *singular* — not brave, not independent. Which is why thoroughly servile clergies are compatible with centuries of stability.

And why the antinomy is instantaneous rather than permanent. *A witness is an author* holds of **fresh** instances. Domesday in 1086 is testimony by living men who can be leaned on; Domesday in 1200 is a fact about the past that nobody alive authored, and still an instance record. So an instance-machine ages into a rule-like object — which is why a registry is a device for converting witness into distance over time, why long-running registries are so much stronger than new ones, and why the thing nobody can do is start one in a crisis.

6. What it must be

A rule can be leaned on comprehensively in almost every respect and still coordinate, provided one thing holds.

> ***Think of a rule as a machine that takes some process and returns an answer. The constraint is not on who operates the machine. It is on the set of answers it can possibly return — and the participants must not be in that set.***

The requirement is not independence, and the case that shows it is the one that looks least likely. In 1261 the sultan of Egypt, Baybars, created a caliph for himself. After the Mongols destroyed Baghdad he found a survivor of the Abbasid house, had jurists examine the pedigree, installed him in Cairo and swore allegiance to him. He controlled every input to that office and could not put himself in the output. The line legitimated Mamluk sultans until 1517, possessing no army, territory or revenue, while the sultans it certified were murdered by their own officers with regularity.

At bottom the requirement is about tense. A fact about the present moves, so consulting it reports today's weather and returns a different answer next month, which is exactly what a coordination device cannot do. **A fact about the past cannot move.** It does not matter whether it is true; it matters that it is over. Which explains why every new ground in the record is announced as a *recovery*, why nobody audits a genealogy, and why manufacture fails: a ruler building a rule is proposing a present fact, and every witness knows it is present because they watched it become one.

But finished is not enough. Tibetan recognition of reincarnated office-holders was a completed public event conducted by clerics who then died, and it was captured anyway — not by un-holding a recognition but by re-making the judgement, because the procedure yielded an opinion rather than a name. Hence the refinement:

> ***The founding act must be finished and self-executing. It must produce a name, not a judgement.***

A lot drawn produces a name. A pedigree certified produces a name. A recognition of an infant produces an assessment, and assessments are made afresh by whoever has an interest. When a Qing emperor imposed a golden-urn lottery on those recognitions in 1793, he did not add a rule. He removed a judgement.

7. How anybody ever gets one

The third load-bearing claim is in this section.

The standing objection

There is an obvious objection and it must be conceded before it is answered. **Somebody chose these restrictions.** Somebody decided only a Chinggisid may be khan; Baybars went and found his Abbasid.

This is the objection **William Riker** made in 1980 to the standard account of institutional stability, and it has never been met. **Kenneth Shepsle**, writing in 1979 and with **Barry Weingast** in 1981, had argued that legislatures are stable because institutions restrict what can be compared with what — committee jurisdictions, germaneness rules — producing what they called *structure-induced equilibrium*. Riker replied that institutions are themselves chosen, so if the players can rewrite the restricting rules the instability simply moves up a level; later work has shown that the choice of a restricting rule inherits the instability of what it restricts.

The answer is not that nobody chose. It is that some choices cannot be re-made.

> ***A restriction consisting of a completed past event is endogenous at the instant of its creation and exogenous forever afterwards — including to the man who made it.***

Riker is right about the flow and wrong about the stock. If the players can go on re-choosing, instability relocates and he wins. If the restriction was bought once, irreversibly, at a moment now past, there is nothing left to re-choose.

Constantine is the proof, because he tried. He summoned the Council of Nicaea in 325, drove through a creed, and exiled those who would not sign with their writings ordered burned. Then within about three years he recalled Arius; by 329 the Arian bishop Eusebius of Nicomedia was back in high favour; in 335 he exiled Athanasius, the creed's defender, to Gaul; in 336 Arius was to be readmitted to communion; and in 337 Constantine was baptised on his deathbed by Eusebius of Nicomedia. Athanasius was exiled five times as imperial winds shifted.

The creed survived all of it. He had the entire apparatus of the Roman state with which to fail.

The two prices

Which yields the acquisition question: if a rule cannot be minted by the man who needs it, how does a man with none ever get one?

Not by force, which cannot compel recognition. Not by staging his own acclamation, because everybody sees who arranged it.

The first price is time. The Roman settlement of 27 BC announced a *restored* republic, and its author spent forty years insisting nothing had been founded — so that the men who mattered were not the senators who remembered the proscriptions but their sons, for whom the Republic had always been restored.

> ***The interval is not recovery time. It is the minimum period in which an assertion becomes a fact about the past — long enough that the men doing the checking were not in the room.***

The second price is risk, and it buys the same property immediately. In February 1736 Nadir Shah assembled the notables of Iran on the Mughan plain with his army camped around them, invited them to choose between himself and the Safavid heir, had the head of the religious establishment strangled for observing that the assembly favoured the Safavids, and required the rest to sign. He then convened jurists and obtained a signed religious settlement giving him what he wanted. He got nothing from either. He ruled nine more years, was murdered by his own officers, and the arrangement dissolved at once.

In the autumn of 1747 the Durrani chiefs met near Kandahar and deliberated for nine days among rival candidates. Ahmad Khan did not campaign. A religious figure came out and named him. He ruled twenty-five years, died in his bed, and was succeeded by his son.

> ***A rule costs one of two things: a generation, or a real chance of being refused. Assert and wait, or ask and risk. There is no third price*** *— and an assembly that cannot say no cannot say yes.*

Which explains why most rulers pay neither. Time costs a founder nothing he can feel. Risk costs him everything, at the moment he is least willing to spend it. A ruler who declines is not making a hard choice badly; he is declining the only transaction that was ever on offer.

What it is made of

The material is other people's uncoerced, costly behaviour, accumulated before the question arose. There are two production routes.

Accumulated petitions. By 1059, when a pope invested a Norman adventurer with lands the papacy had never held, the Roman see had spent nearly seven centuries answering questions it had not asked — the characteristic papal document being a *decretal*, a reply to a petition, the earliest surviving from 385. That is not a record of Rome asserting. It is a record of everyone else choosing.

Accumulated costly display. The cultural-evolution literature associated with **Joseph Henrich** calls these *credibility-enhancing displays*: acts that would be costly to the actor if he did not actually believe what he professes. Martyrdom, celibacy, poverty, refusal under persecution.

Neither is fakeable by a beneficiary, for one reason: the raw material is other people's voluntary action, action you paid for is not voluntary, and everyone can see the difference.

Which gives a test needing no judgement of anybody's sincerity — **prior, not old.** Rome's decretals predate the Norman investiture by six centuries. Against that: a self-conferred divine title postdates the acclamation; a court-convened religious settlement postdates the crown. And there is a second route to the same property. Judicial review is not in the American constitution and was asserted in 1803 by an interested party — and it held, because Marshall claimed the authority by *declining the power*, striking down the statute that would have armed his own court, in a case whose practical outcome handed victory to his opponents.

> ***Either the material is prior to the prize, or the assembler takes nothing under what he assembles.***

And why it is so often empty

The anthropologist **Roy Rappaport**, in *Ritual and Religion in the Making of Humanity* (1999), defined the sacred as the quality of unquestionableness imputed to postulates that are objectively unverifiable and absolutely unfalsifiable — explicitly noting that this requires nobody to believe them, since one may publicly accept what one privately despises. And he found an inverse relation between material specificity and durability: the less a claim says about anything checkable, the longer it lasts. Specifying nothing, they can apparently sanctify anything.

The bargaining reason is sharper. A magnate will fight over an acre. He will not fight over who somebody's great-grandfather was — the claim is unfalsifiable *and materially irrelevant*, so conceding it costs him nothing he can name. So he signs, and the acres are then licensed by what he signed.

> ***Agreement on the expensive thing is obtained by holding the vote on the cheap one.***

But there is an optimum rather than a monotone, and it matters: a rule that says *nothing* cannot answer a succession. So sharpness is a design variable, and which way it is set tracks which risk the designers feared. A bright line makes a coalition assemble easily, which protects holders against a ruler. A vague standard makes it assemble rarely, which protects a ruler against opportunistic coalitions.

8. Witness, custody, and indexing

The instance is a fact about the present world: who holds this, where the boundary runs, what the yield was, who is the eldest son. It is defended by witness — proximity, multiplicity, and **custody**.

The scholarly convergence here is large. **James C. Scott**'s *Seeing Like a State* (1998) argues that the modern state's characteristic project is *legibility*: cadastral surveys, population registers, permanent surnames, standardised measures, the invention of freehold tenure. And his central observation about the cadastral map is the one that matters here — for purely local purposes it was redundant, since everyone knew who held the meadow by the river. The map exists to make the local situation legible **to an outsider**.

Where this departs from Scott is in what the machinery is for. He reads legibility as an instrument of control and extraction, and it is. This account says it is *also* the precondition of any coordination whatever: the register that makes a peasant taxable is what lets a bystander establish whose field was seized.

And the departure yields the measurement. A distinction drawn in the commentary on Scott is exactly what is needed: **legibility is standardised** — a large institution gets a precise view of each individual — **while transparency is simple**, an ordinary person getting an accurate view of the institution. Those come apart, and which one a machine supplies is the whole question.

The custody test: where were the copies kept, and who could reach them?

That is scoreable from administrative records without knowing outcomes, which makes it the one part of this apparatus that can be run blind. One-sided visibility is a distinct failure mode: a machine that lets the ruler see every subject and no subject see the record is surveillance rather than an instance-machine.

Indexing

A register indexed by the asset cannot record a second claim to the same thing, because the second entry has nowhere to go. A register indexed by the claimant can and does, because each document is separate and nothing forces them into contact.

The cleanest demonstration is a natural experiment. In the late eighteenth century the land north-west of the Ohio River was surveyed under two systems at once, by the same government, for the same kinds of settlers. The Virginia Military District ran on

metes and bounds — each claimant describing the land he chose by natural features and neighbours' corners, indexed by the claimant. The rest ran on a rectangular grid laid down in advance, so every parcel had a unique designation before anyone claimed it, indexed by the asset. The Virginia District generated more nineteenth-century land litigation than the rest of Ohio combined.

And the same variable governs thrones. *Who has a claim to this throne* returns a list — every son, every brother, every cousin with an army. *Who is the eldest legitimate son* returns a man, and a second claim has nowhere to be written down. Primogeniture is asset-indexing applied to the only asset a pre-modern order could afford to register, and its evidence base is distributed witness, since birth order was observed by midwives, servants, godparents and a parish, none of whom could coordinate a lie.

9. Why it cannot be built voluntarily

Here is the finding that explains where instance-machines come from.

The cost is not building the register. **It is migrating to it** — because to make a register conclusive you must adjudicate every existing claim once.

The demonstration is modern and unusually clean. Twenty-one American states adopted Torrens title registration between 1895 and 1917, a system in which a certificate is conclusive rather than merely evidence. It never displaced deed recording anywhere; Colorado abolished its registry in 2020 and Washington in 2023. Initial registration required a court proceeding, an examiner's investigation, published notice and attorney fees — and a Chief Judge of the Massachusetts Land Court named the irony exactly: the foundation of the American registration system was the one thing Torrens set out to abolish, namely a judicial proceeding.

And nobody would pay, for a structural reason. The person who pays the upfront cost is not the one who benefits; the savings accrue to future transactions. So an owner with a clean title declines, each holder declines individually, and the public good is never produced. **That is the bystander problem applied to *building* a coordination device. Nobody buys a share of a register.**

Which is why every successful instance-machine in the record was compulsory, simultaneous, and laid on ground whose prior claims had just been extinguished. Domesday came twenty years after a conquest. The American grid was laid on land the government treated as unencumbered. Japan's cadastral survey followed a unification; the Napoleonic cadastre followed a revolution that had already reallocated a large fraction of the country's property.

> ***Possession becomes ownership at an adjudication event — imposed on everybody at once, on cleared ground. A conquest is not only a transfer of possession; it is the only affordable occasion for one.***

And there is a third route, cheaper than either: capture a working one intact. Where a conquered order already ran alienable property in a functioning register, the conqueror needs no theory of land at all and simply redirects the flow.

10. It defends itself for nothing

Once the two machines exist, the arrangement defends itself, and the mechanism is more automatic than the usual account allows.

A man defends his own holding for the most ordinary reason available, which is that it is his. But his holding derives from the same source as every other in the order — that is what an order is — so defending his own is, without any further intention, defending the source. He need not think about the source, approve of it, or know the other holders exist.

> ***Every man, by defending his own position, defends the whole arrangement by default.***

Which is why such arrangements need no civic virtue, no shared purpose and no loyalty, and why orders in which nobody believes anything continue to function.

And it gives the operative definition of a title:

> ***A title is a membership card in a mutual-defence arrangement. It is worth precisely what that arrangement is worth and nothing whatever outside it.***

Which explains the drawers full of authentic worthless deeds — Ottoman-era titles to land now under another sovereign, pre-1917 Russian documents, East Prussian deeds held by families expelled in 1945. Nothing about the paper changed and nothing about the land moved. The club dissolved, and nobody who now holds force in that place holds anything that runs to the same register.

11. Two variables govern how strongly it holds

Strength: the number of distinct goods bundled into one position. A settler in a colonial order whose land, citizenship, standing above the colonised and physical safety as a minority all rest on the same arrangement will defend his farm, the army, the caste line and the settlement in one motion. A man whose entire position is one revocable entry in a book has exactly one grievance available to him.

Tightness: the distance to his next-best position.

> ***The strongest default is not the one that rewards most. It is the one where the alternative is not a worse position but no position at all.***

The two most securely bound classes in Qing China were the ordinary bannerman and the local degree-holder, and neither was rich. The bannerman drew a modest stipend and was legally barred from farming, trade and craft; the gentleman held exemptions and standing that existed only in a register the state maintained and could edit — as it did in 1661, striking thousands of Jiangnan degree-holders from the rolls over tax arrears. The gentry kept their fields. The state kept the list. Both were held not by the size of the benefit but by having nowhere to go.

So do not measure the benefit. Measure the ladder out.

Three corollaries

A quota that limits a man also entitles him. Reserving half the senior appointments for a conquering caste also reserves the other half, *in writing*, against the ordinary operation of favour — which converts the conquered elite's share of office from a favour into a rule.

A gift makes a dependent; a transaction makes a defender. A grant has one author, so the holder's claim depends on the giver's survival. A sale has two parties with opposed interests, a price, and consideration already passed, which is dispersion inside a single conveyance.

And an order's anti-coordination machinery is a map of where its defaults failed. Where a link cannot be made self-defending, the apex engineers against coordination instead: rules of avoidance, short tenures, overlapping jurisdictions, split commands, confidential channels that make every colleague a potential informer. Read

the surveillance as the order's own audit. It is more honest than any doctrine it produced about itself.

12. A corollary: why a borrowed rule needs its own instance-machine

A conqueror who adopts the conquered order's rule entire pays almost nothing for it. But he has adopted a rule his enemies also hold.

In 1645 four parties claimed the Mandate of Heaven in China — the Qing, the Southern Ming court at Nanjing, the remnant of Li Zicheng's rebellion, and Zhang Xianzhong in Sichuan. All four made the identical claim, in identical language, from identical texts, and the doctrine contained no rule for deciding among them except the outcome.

So a soldier could not tell a subject from an enemy by anything either of them believed, said, wore or worshipped.

The Qing solution was the queue: from July 1645, on pain of death, every adult male in the empire to shave the forehead. And the edict's own logic is the evidence — it argues from *uniformity* rather than from virtue, defines membership by compliance, and reserves its heaviest clause for officials who might *petition* about the policy. That clause is aimed at men with brushes.

> ***The queue is not part of the rule. It is an instance-machine wearing a thin doctrinal coat*** *— allegiance made visible at a hundred paces, on every adult body, and unreversible in less than several years of hair growth.*

Which generalises:

> ***The more perfectly a rule is borrowed, the more necessary a separate instance-machine — because a rule everybody shares identifies nobody.***

And it has a corollary about what such an order will suppress. A conqueror with an imported creed owns the texts, the clergy and the exegesis and can litigate doctrine. A conqueror using the conquered creed owns none of that, and the canon arms both sides. What is his alone is the account of how he came to hold it — so he polices history rather than theology, which is precisely what the Qing did: doctrine, religion and criticism of officials substantially free, and executions over reign titles, private histories and the word *barbarian*.

13. The life-cycle

Take an order that has solved the problem and stipulate that nobody behaves badly. It will still be in crisis in two hundred years.

More claimants than chairs. Peace makes surplus, surplus makes education, education makes claimants — and the number of positions does not grow, because a fixed assignment is what an order is. So the ratio worsens fastest when things go best. The frustrated aspirant is a man for whom the check has returned *no*, and a man with no holding is not in the coalition. So what erodes is not comfort but the enforcement mechanism, because the enforcement mechanism *is* the holders.

The borrowed literature here is Jack Goldstone's structural-demographic model (1991) and Peter Turchin's extensions. Critics argue that "elite" is counted rather than defined, and a 2023 empirical test found the central predictions unsupported for the industrialised United States. The mechanism is used as documented in pre-modern cases and nothing rests on the model's modern forecasting.

Two responses, and neither is safe. *Redistribution* buys a chair by publicly demonstrating that the answer can move, which is the one property a rule must not have. *Expansion* adds positions without moving any existing answer, and the rule extends to new ground automatically. Redistribution is rule-consuming, and expansion appears to be rule-preserving.

But expansion is not rule-preserving. It is rule-diluting on a delay, and this is a correction to the account rather than a caveat on it.

Positions taken on new ground are authored, in practical fact, by the man who took the ground. The centre ratifies afterwards and everybody involved knows the order of events. So expansion does not merely postpone the claimant problem; it **manufactures a second source of title inside the same order**, which is the rule-forking failure mode arriving quietly and with everybody's approval.

That sharpens the timing considerably, and in a testable direction. The received account expects the crisis when the frontier closes. This one expects it **when peripherally-authored holdings become numerous or valuable enough to constitute an alternative answer to the question *by what does a man hold* — which can happen while the frontier is still wide open**, and which predicts that the trouble should begin in the newest provinces rather than in the exhausted centre. That is a different claim, it can be checked against any expanding order with datable provincial acquisitions, and it can be lost.

Then the apex spends the rule. Forced loans, attainders, revived dormant claims, prosecutions whose evident purpose is the estate. The damage exceeds the sums, because a confiscation removes one estate and the demonstration reaches every holder at no transmission cost. The tell that separates hard taxation from the terminal kind is whether the taking is framed as an application of the rule or an exception to it.

And then it ends as a run, not an erosion. The formal treatment is **Douglas Diamond and Philip Dybvig**'s model of bank runs (1983): such an institution has *multiple equilibria* with identical fundamentals, and which one obtains depends on nothing but what each depositor expects the others to do. Ownership works the way money works. There is no gold in the vault, everyone knows it, and the note still buys bread, because value is not a property of the paper but the fact that everyone expects everyone else to take it. Nobody is deceived.

> ***The erosion does not cause the collapse. It makes the second equilibrium reachable.*** *Which is why collapses are sudden, never forecast, and why an order that is entirely hollow is indistinguishable from a sound one until the morning somebody moves first.*

And when the fighting stops, exhaustion is not what stopped it. Everyone in a warlord condition wants a settlement, and wanting one no more produces one than wanting a common language produces a common language. A treaty is a fact about the present at the moment of signature, so consulting it returns a forecast about whether the parties still want it. The settlement comes when somebody finds something on the shelf that nobody currently playing made — and pays for it in one of the only two currencies there are.

14. The failure modes

One condition, broken from two directions. State the requirement as a relation between two sets: the answers a rule can return and the set of participants must not overlap.

A participant enters the answer set — by war, by purchase of the electors, by marriage into the qualifying line. The remedy is a **bar**.

Or the answer set becomes a participant — the family holding the office converts it into heritable property, so a neutral seat becomes one lineage's estate and that lineage is now a player with holdings to defend. The remedy is a **stop on transmission**.

Descent bars entry superbly and does nothing against capture, since it guarantees transmission inside the qualifying family. Celibacy prevents capture completely and bars nobody, since anyone may take orders. Durable arrangements run one of each; fragile ones have only a bar and are eaten from inside.

A second author appears. Somebody other than the source can grant holdings that outlast the grant — and the holder from a patron has only a conditional interest in the ground, so the patron brings a piece of the coalition with him when he moves. Heritability is a special case: a man who can transmit his position is himself a source of title, for one person, forever.

The rule forks, with nobody outside the contest to arbitrate. Force cannot repair it, because seizing an office whose value is its non-seizability destroys the thing seized.

The rule goes silent at a succession, naming a category and not a member. That is what converts a defender into a defector, since a man whose position requires an answer the rule cannot supply must either find another rule or make one.

And the instance goes dark. Nobody revises the rule and no second author appears; the machinery that establishes what is there and who holds it simply stops being run, or moves out of reach. There are two sub-modes and the second is worse. A **lapse** is visible if you look for it — the Ming ran a nationwide cadastral revision in 1387 and the next comprehensive survey was resolved on in 1578. A **privatisation** is invisible, because the record still works accurately for its members and fails only when a third party needs it, which is exactly when it matters.

> ***And the instance axis does not fail into silence. It fails into counterfeit witness,*** *because the rule still demands an answer and somebody will supply one.*

The modern case is documented, litigated and priced. When American mortgage records moved from county recording into a private members' registry, a federal court

described the result as replacing the county-by-county public system with a largely invisible and not always reliable system of voluntary record-keeping by members — and when foreclosure required proof of the chain, holders often could not establish that they held what they were foreclosing on. The gap filled with mass attestations signed by employees who had verified nothing. That is the same forgery as a fabricated genealogy, on the other axis: the beneficiary supplying what was supposed to come from somebody else.

15. Predictions

P1 — Simultaneity beats quality. Crude, formal, bright-line rules — fixed dates, fixed fractions, fixed thresholds, forms of words — should prove more durable than flexible standards that produce better outcomes case by case, because only the first lets strangers reach the same verdict independently. *Falsified if* discretionary standards systematically outperform bright lines in producing durable elite settlements.

P2 — Retroactive action is the leading indicator. A large seizure under an old rule should be survivable; a small one under a rule announced afterwards should not, because it establishes that the definition is movable. *Falsified if* resistance tracks the magnitude of a taking rather than its form.

P3 — Registers follow clearances. Comprehensive asset-indexed registers should appear within roughly a generation of a conquest, unification, revolution or frontier opening, and should be rare as retrofits onto settled ground with intact prior claims. And voluntary opt-in registration should fail everywhere it is tried.

P4 — Counterfeit witness, not silence. Where an instance-machine degrades while the rule still demands answers, expect manufactured attestation at scale rather than an absence of documents.

P5 — Custody predicts contest. Scored *before* outcomes are consulted, orders whose instance records were held where the people bound by them could reach them should show lower rates of contested holdings than orders whose records were reachable only by the ruler. **This is the test that matters and it has not been run.**

P6 — The two prices, and no third. Founders who paid in time should produce arrangements outlasting them; founders who submitted to a procedure that could genuinely have refused them likewise; founders who paid neither should fail within a reign. *Falsified if* staged assemblies that could not have said no produce durable warrants.

P7 — Tightness beats size. The most reliably loyal strata should be those with the shortest ladder out rather than the largest benefit, and should include groups that were poor.

P8 — Borrowed rules require separate marks. Conquerors who adopt the conquered order's legitimating doctrine wholesale should impose a separate, non-doctrinal, bodily or documentary mark of allegiance, and should police history rather than theology.

P9 — Trouble begins at the edge, not at the close. In an expanding order, contested holdings and rival authorship should appear first and most densely in the

most recently acquired provinces, and should become general *before* the frontier closes rather than after. *Falsified if* the crisis reliably tracks the closing of the frontier rather than the accumulation of peripherally-authored title.

And the account fails as a whole if a durable arrangement is found whose ruler was the sole author of his own title and whose settlement survived three transfers of the top office without armed challenge; or if a well-formed rule is found holding titles with no coalition of holders behind it; or if a custody score run blind shows no relation to whether holdings were contested.

16. Where this is weak

Two places where it may be circular, and they are the serious ones.

The membership-card claim risks unfalsifiability by re-description. If a title is worth only what its coalition is worth, then any surviving title had a coalition and any dead one lacked one. The escape is to measure membership rather than strength — how many holdings in an order derive from one source, and what they are worth — which is readable off registers, tax rolls and grant records and moves before a collapse rather than after. That has not been done.

And the whole account may be a description of survivors. Orders that lasted produced the archives; orders that failed in a decade left nothing. Worse, the bias is not random with respect to the subject, because the record is a technology of the concentrated, so the configurations least able to leave paper are precisely the diffuse ones this account most wants to see. The partial answer is that the two explanations diverge on a second prediction: the filter says nothing about failures, while the mechanism says the well-documented failures should be the men who pointed only at themselves, and they conspicuously are. That is weaker than a proof and stronger than an artefact.

Other problems, stated plainly. The formal results in Part 7 are used analogically and the analogy is loose; theorems about voters ranking options are not about armed men and force, and what they buy is an explanation of why the solution set is small rather than any claim about a particular case. Several claims rest on one case each. The two-axis distinction may be a filing system for facts already held rather than a mechanism, and the defence — that it generates the custody test and the instance-decay route and *derives* things previously stipulated — depends on those surviving testing. The modern evidence is two cases from one country about one asset class. And the coding throughout was done by people who knew the outcomes, which is internal consistency and not evidence.

One case in this paper's own material cuts against Part 6. Assyrian and other conquest orders reassigned magnate holdings comprehensively at each accession, which looks like retroactive restatement at the largest possible scale, and ran for centuries. The available answer is that scheduled reallocation under a known rule is prior, while ad hoc reallocation justified afterwards is not: holdings under the first are insecure but *predictably* insecure, and men can plan around a date. That answer was reached after the difficulty was noticed and a reader is entitled to discount it accordingly.

17. Who paid for this

Everything above concerns a few hundred armed and wealthy men working out how not to kill each other.

The people they ruled do not appear in it, and the absence is not an oversight — it is a description of the arrangement. The six magnates of Part 1 are the whole of the coalition. The cultivator is not in this paper because he was never a member of the club whose card is being discussed, and when his holding was taken there was no coalition for whom defending it was defending themselves, which is exactly the condition the paper has spent seventeen sections describing. In his case it was permanent.

An instance-machine is a machine for making people countable, and the reason a state wants people countable is almost never to protect them. The villagers who swore to Domesday were certifying under oath the transfer of their own labour to men who had arrived twenty years earlier by force, and the survey recorded them alongside the ploughs as part of what a manor was worth. The clearance that Part 9 identifies as the precondition of an affordable adjudication event is, in every case, a dispossession — the American grid was cheap because indigenous title had been extinguished by other means, and the survey's cleanness is a direct measure of how completely.

The bargaining mechanism in Part 7 is the same fact from the inside. Agreement on the expensive thing was obtained by holding the vote on the cheap one, which is a description of how the acres of people who were never asked came to be licensed by a vote about somebody's great-grandfather.

And the guarantee in Part 10 is a guarantee among the guarantors only. A settlement does not reduce violence. **It relocates it** — from horizontal, between armed peers who could contest, to vertical, onto people who could not. The peace among the six is purchased from everyone who is not one of the six.

Legibility is not pardon. Showing how a device worked, and admiring the economy with which it worked, is not a claim that it was good. What is described here is a solution to the problem of powerful men taking things from each other. It is not a solution to anything else, and it was paid for by people who were never asked.

Conclusion

Force settles who holds a thing today and cannot settle whether people will still treat it as his next year, because that depends on what other people do when nobody is watching. And those other people are not watching the strong man. They are watching each other, each working out whether he would be the only one to object.

So what they need is something they can all check, and the binding constraint is that they must check it at the same moment without conferring, because there is no time and because a meeting is itself a conspiracy that can be punished.

The answer they need always has two halves, since the question is always *does this case fall under that rule*. A rule is attacked by revision, so it is defended by distance. An instance is attacked by concealment, so it is defended by witness. And the two cannot be combined, because a witness is an author — so every order needs two machines pointed in opposite directions, plus somebody standing in the joint, and that man is the cheapest thing in the order to attack.

The rule must be a finished fact that cannot return any of the participants as its answer, and it must be self-executing, producing a name rather than a judgement, which is why a lot works where a recognition was captured. It cannot be minted by the man who needs it, because it is made of other people's voluntary costly behaviour and action you paid for is not voluntary. And acquiring one costs a generation or a real chance of being refused, with no third price — which is why Constantine could not take back the creed he had himself compelled, and why Nadir Shah, strangling a cleric in front of an assembly his army surrounded, obtained nothing at all.

The instance must be witnessed and its record reachable by the people it binds, and it cannot be built voluntarily, because the man who pays to enter a register is not the man who benefits from its existing. So it is imposed at once, on everybody, on ground whose prior claims have just been extinguished — which is why registers follow armies by a decade and why a conquest is the only affordable occasion for one.

Then the thing defends itself for nothing. Every man defending his own position defends the whole without intending to, which makes a title a membership card in a mutual-defence arrangement, worth exactly what the arrangement is worth, and explains the drawers full of authentic worthless deeds whose clubs dissolved. What makes the binding tight is not the size of the benefit but the shortness of the ladder out, which is why the most reliable defenders in the record were frequently poor.

And it comes apart the same way every time. The order's own success produces more claimants than chairs. Expansion relieves the pressure and, in doing so, quietly

manufactures a second author at the edge, so that the order acquires a rival answer to its own question while everyone is still congratulating themselves on the new provinces. The apex then reaches for the last asset and uses the rule to move holdings, which is not merely a taking but a public demonstration that the answer can be pointed. Or, quietly and with no event at all, the instance-machine simply stops being run — and fills, because the rule still demands answers, with manufactured testimony.

Then it ends as a run rather than an erosion. Nothing in the vault changes. Expectations change because each man sees the others moving, which is why a hollow order is indistinguishable from a sound one until the morning somebody moves first.

> ***The interesting question about any arrangement is therefore not who runs it, but this: could all the men who would have to enforce a rule against a breach reach the same verdict on the same day, without talking to each other? Everything in this paper is a description of what has to be true for the answer to be yes.***

Addendum — The mapping

Where each element of the argument was found, what it is doing there, and how confident the identification is.

This addendum exists so the fit can be checked rather than asserted. Each case is treated briefly and with its principal reservation. Fuller treatment, with sourcing and source problems, is in the case studies these summaries draw on.

The rule, and how it was obtained

Rome, 325 — the completed act. Constantine summoned the Council of Nicaea, obtained a creed, and exiled the dissenters with their writings ordered burned. He then spent a decade reversing himself: Arius recalled within about three years, the Arian bishop Eusebius of Nicomedia restored to favour by 329, Athanasius exiled to Trier in 335, Arius readmitted in 336, and Constantine baptised on his deathbed in 337 by Eusebius of Nicomedia. The creed survived. **This is the paper's strongest single case, because it is the mechanism observed under maximum pressure from the person best placed to break it.**

Persia, third century — the rule carved as an image. At Naqsh-e Rajab a relief shows Ahura Mazda investing Ardashir I, god and king at equal height, and the only mark of dependence is that the god holds the diadem and the king reaches for it. Beside it is an inscription by the priest Kartir, who served four kings and who states in it that he wrote so future readers of imperial documents would know who he was. *The case also shows the limit: Kartir was made chief priest by a king, so the reading of the rule sat in the palace's gift.*

Assyria, second and first millennia — the case at maximum strength. The rulers of Assur styled themselves *iššiakki Aššur*, vice-regent of the god, in continuous use for over a thousand years. And Ashurnasirpal II, whose annals record massacres, impalings and the flaying of a defeated chief, gave himself one of the longest lists of self-description of any Assyrian king — strong king, king of the universe, ferocious dragon, merciless hero — and in the same list called himself the destructive weapon of the great gods, which is a thing somebody else wields. If being the most frightening man alive settled the question, these men were in every position to say so.

Cairo, 1261 — the constraint is on the answer, not the process. Baybars found an Abbasid survivor, had jurists vet the pedigree, and installed him. Every input controlled; himself excluded from the output. The line ran to 1517 with no army, territory or revenue.

Córdoba, 756–1009 — the ceiling. In two hundred and fifty-three years, no bloc in a fiercely divided elite ever put forward a candidate of its own for the throne. In the 890s the house was reduced to little more than one river valley and survived as a name in a city. Then in November 1008 the chief minister's son had himself nominated heir; he was dead by March; the caliphate left the family in 1016 and the city's notables abolished it in 1031. *The narrative descends from the dynasty's own court annalists.*

Francia, 737–751 — you cannot abolish a rule, only replace it. Charles Martel left the throne vacant for four years and his sons put a Merovingian back on it in 743. When Pepin moved, he sent envoys over the Alps to ask the pope whether it was good that there were kings in Francia with no royal power — because everyone in Francia was a participant — and was raised by papal authority, unction and Frankish election, three authorisations none of them his. The last Merovingian was tonsured, a status disqualification used against the man it had protected. *Court-adjacent sources, written for the beneficiaries.*

Mughan 1736 and Kandahar 1747 — the two prices, paired. Nadir Shah assembled the notables with his army around them, had the chief cleric strangled for saying the assembly favoured the Safavids, required signatures, and separately obtained a religious settlement from jurists he convened. He got nothing from either. Eleven years later and a few hundred miles east, chiefs deliberated nine days among rival candidates and named a man who had not campaigned; he ruled twenty-five years and was succeeded by his son. **Same region, same century, same category of ruler, opposite handling of the founding act.**

Rome, 27 BC — the price paid in time. A restored republic announced, and forty years spent insisting nothing had been founded, so that the men who mattered were the sons of the men who had watched the proscriptions.

Tibet, 1793 — finished is not enough. Recognitions of reincarnated office-holders were completed public events and were captured by aristocratic families through interpretation, until a Qing emperor imposed a golden-urn lottery. He removed a judgement rather than adding a rule.

Melfi, 1059 — what a rule is made of. A pope invested a Norman freebooter with lands the papacy had never held. What the Normans were buying rested on nearly seven centuries of Rome answering other people's questions in matters where it had no stake — a record of everyone else choosing.

The instance

Ohio, late eighteenth century — the natural experiment. Two survey systems, one government, one frontier. Metes-and-bounds in the Virginia Military District, indexed by claimant; the rectangular grid elsewhere, indexed by parcel. The Virginia District produced more nineteenth-century land litigation than the rest of Ohio combined.

Torrens, 1895–1917 — why registers cannot be built voluntarily. Twenty-one American states adopted title registration and it never displaced deed recording; Colorado abolished its registry in 2020, Washington in 2023. Initial registration required a judicial proceeding, paid by an owner whose title was already clean, for a benefit accruing to future buyers.

Domesday, 1086; the American grid; Hideyoshi's survey; the Napoleonic cadastre — the adjudication event. Each imposed at once, compulsorily, on ground whose prior claims had just been extinguished. Domesday ran on sworn juries of local men, which is witness at maximum density.

Qing China, 1644 — the third route. Land was already private, alienable and registered in fish-scale and yellow registers, so the conqueror needed no theory of land at all and simply redirected the flow. What he had to construct instead was a doctrine of persons: a roll.

Mortgage records, c. 1997–2012 — the instance going dark in living memory. A public county-by-county recording system replaced by a private members' registry; foreclosing parties unable to establish the chain; the gap filled by bulk attestations from employees who had verified nothing; inconsistent outcomes across jurisdictions; resolution by settlement and statute rather than by the record.

Ming and Ottoman survey lapses — the other sub-mode. A nationwide cadastral revision in 1387 and the next comprehensive survey resolved on in 1578; Ottoman survey practice collapsing after 1715. Nobody defied anything; a clerk was not replaced and a survey was postponed.

The coalition, and the two variables

Ottoman, pre-1917 Russian, Cuban, East Prussian deeds — the membership card. Authentic, and worthless. The club dissolved.

Qing China — tightness beats size. The most securely bound classes were the ordinary bannerman, drawing a modest stipend and legally barred from every other livelihood, and the local degree-holder, whose entire standing lived in a register. Neither was rich. In 1661 the state struck thousands of Jiangnan degree-holders from

the rolls over tax arrears and executed eighteen who protested. The gentry kept their fields. The state kept the list.

Qing quotas — the ceiling is also a floor. The Manchu–Han pairing at the boards is read as domination and was; it also made the conquered elite's share of senior office a rule rather than a favour.

Colonial settler orders — strength as bundled goods. Where a man's land, citizenship, caste standing and physical safety all rested on one arrangement, defending his farm was defending the whole order in one motion — and a surplus population with no outlet became its most militant base rather than its opposition, because a caste line made downward alliance self-destroying.

Syracuse, fifth to fourth centuries BC — the counter-case. No register, no cadastre, no court of title; six comprehensive redistributions in two centuries; membership issued and reissued by each ruler. A man holding a house because the tyrant said so is a dependent rather than a defender, which is why every regime there was overthrown by a coalition containing its own beneficiaries. **The exception proves it**: the one division that held was *sold* — a thousand talents, with original owners given the right to buy back their own.

Qing anti-coordination machinery — the audit read backwards. The throne left the gentry and the banner garrisons to the default and surrounded the *governors* with avoidance rules, short tenures, overlapping jurisdictions, split commands and confidential channels. A governor-general with troops and revenue a month from the capital had genuinely pointed outward once, in 1673.

The failure modes, and the life-cycle

Córdoba 1008 — entry. A participant put himself in the answer set; four months.

The Roman consulship — capture. Collegiality and annuality eroded through repeated and then continuous tenure until an office unobtainable by monopoly became the prize of whoever held it longest.

Ottoman strata — heritability as second authorship. Every stratum that acquired the power to transmit its position thereafter defended the transmission rather than the arrangement — the learned hierarchy first, the corps next, the provincial magnates last and by purchase in 1695. And the register lapsed afterwards, because a machine that tracks revocable assignments has no function once claims are heritable.

Qing enrolment to descent — the catchment edit performed on the conquerors. By 1648 fewer than one in six bannermen were of Manchu ancestry and roughly three-quarters were in the Han banners: the boundary was enrolment. When

fiscal pressure required the caste to shrink, the state reached for descent — a criterion that had never been the condition of entry.

Qing secret designation, 1723 — the succession answer that attacks the information. The heir's name written, sealed and placed behind a tablet in the Palace of Heavenly Purity, with a duplicate elsewhere and two men told it existed. The princes remain in place, capable and ambitious; what is removed is the one fact — which one — without which no faction can form.

France, 1789–1804 — reopening the register, and the exit. Confiscation on an enormous scale, fifteen years of exactly the condition this paper describes, and an exit that was not a better story but a code and a registry — inherited and applied by eight mutually incompatible regimes.

1688 — choosing the rule while the army was already ashore. Days spent arguing over whether a king had *abdicated* or *deserted*, with the practical outcome settled. They were not describing what had happened. They were choosing what would count as a violation in future, knowing that whatever they said could not be unsaid. And the Declaration of Rights was read aloud at the moment the crown was handed over — the rule stated first, in public, before the transfer.

Sources

Coordination and common knowledge. Thomas Schelling, *The Strategy of Conflict* (1960), on focal points. David Lewis, *Convention* (1969), on common knowledge. Michael Chwe, *Rational Ritual* (2001), on ceremony as a generator of it. David Hume, *Treatise* Book III (1739–40), on property as convention. Robert Ellickson, *Order Without Law* (1991). Carol Rose, "Possession as the Origin of Property" (1985), on possession as an act of communication.

Observable versus verifiable. Grossman, Hart and Moore, mid-1980s; contested within that literature and used as illustration.

Instability of contested offices, and the objection. Richard McKelvey (1976) and Norman Schofield (1978) on the chaos theorems — where majority preference cycles it cycles completely, and an agenda-setter can steer anywhere. Kenneth Shepsle (1979) and Shepsle and Barry Weingast (1981) on structure-induced equilibrium. **William Riker (1980) on the endogeneity of institutions** — the objection Part 7 answers. Allan Gibbard (1973) and Mark Satterthwaite (1975) on manipulation, whose three exits correspond to the three families of historical device.

Rules as an engineering specification. Lon Fuller, *The Morality of Law* (1964), on the eight ways King Rex failed to make law — no general rules, unpublished rules, retroactivity, obscurity, contradiction, impossibility, constant change, and divergence between announcement and administration. **The re-reading of these as engineering requirements for simultaneous independent verdict-formation rather than as moral conditions is taken from a companion paper in this series and is the sharpest thing in it.**

Adjudication without enforcement. Milgrom, North and Weingast (1990) on the law merchant at the Champagne fairs: the private judges had no police power and could not enforce judgments, and the system worked by making breaches common knowledge so that merchants could withhold dealings in concert. **The adjudicator does not punish; he makes the breach checkable.**

Legibility. James C. Scott, *Seeing Like a State* (1998). The legibility/transparency distinction underlying the custody test is drawn from the commentary literature on Scott.

The rule's material. Roy Rappaport, *Ritual and Religion in the Making of Humanity* (1999). Joseph Henrich on credibility-enhancing displays.

Jurisprudence. H. L. A. Hart, *The Concept of Law* (1961), on the **rule of recognition** as a social fact constituted by the convergent practice of officials — this

paper is Hartian rather than Kelsenian, and what it adds is *which* social facts can occupy the position, together with the argument that a rule of recognition alone is not sufficient. Hans Kelsen on the presupposed basic norm; Carl Schmitt on the decision, answered in Part 6 by the observation that a decision is a fact about the present; Max Weber, from whom this account differs by requiring nobody to believe anything.

Runs and cycles. Diamond and Dybvig (1983). Ibn Khaldun, *Muqaddimah* (1377). Goldstone (1991) and Turchin, with the criticisms recorded in Part 13. Olson (1993), North, Wallis and Weingast (2009), Demsetz (1967) and Greif (2006) as the principal rival accounts of settlement, each of which supplies a motive where this supplies a mechanism.

Historical cases are summarised in the addendum and are documented, with their sources and their source problems, in the case studies of the Patterns of Power series from which they are drawn. Where the record is contested — and for the earliest cases it usually is — the disagreement is reported in those studies rather than smoothed over here.

A working hypothesis. Held as tested, not revealed.